THE ALBERTA ECONOMY:
AN OVERVIEW

Alberta
Dept. of Economic Development & Trade.

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One of the most dynamic business regions in North America, Alberta offers superb prospects for trade and investment. **In 1988, the Conference Board of Canada estimated that Alberta had a Gross Domestic Product (GDP) of close to $63 billion, making it the third-largest economy in Canada.** Over the past fifteen years, Alberta's average annual GDP growth of 5% has exceeded the rate of growth for Canada as a whole.

Considerable progress has been made in broadening Alberta's economic base over the past two decades. Real growth rates have been higher for manufacturing and the service industries than for the resource-based industries. New industries have been developed, and more traditional industries such as tourism and forestry have expanded. Even in the areas of agriculture and energy, the product mix has been expanded and diversified so that they are now more stable industries than they were in the past. Petrochemicals and plastics, canola, and other specialty crops are all examples of the wider product mix within these industries.

The benefits of a more diversified economic base were demonstrated by the performance of the Alberta economy in 1986. The simultaneous collapse of world energy and grain prices in that year would have had a devastating impact on the Alberta economy without some offsetting growth in other sectors. New industrial development and continued strong performance in the areas of petrochemicals and plastics, forest products, the advanced technology industries, and business services helped to soften the downturn, and provided the basis for a stronger recovery in 1987 and 1988. Investment activity in these industries is now gaining further momentum, particularly in forest products, which will provide the impetus for even stronger and more diversified growth in the future.

Clearly, much progress has already been achieved in diversifying the Alberta economy. In the 1990's further progress is anticipated as the Province's resource, manufacturing, and service industries continue to grow and expand their range of activities. The strong economic growth forecast for the 1990's is expected to be investment-led, with over $25 billion in major industrial projects currently planned or under construction in the province.

Alberta's business structure will continue to be based on small business in the 1990s, which we see as a source of strength. Small business will continue to account for most job creation and innovation in the economy. For these reasons, Alberta has fostered the development of an entrepreneurial culture which reflects the vitality of Alberta's small business community.

OPPORTUNITY INDUSTRIES

The four major components of Alberta's economy are the advanced technology, resources, manufacturing, and service sectors.

Advanced Technology

The Province's advanced technology industries have demonstrated impressive growth over the past decade. **Today, more than 35,000 Albertans are directly employed by approximately one thousand advanced technology firms operating in the Province.**

On a per capita basis, the Alberta Government invests more on research and development than any other Canadian province. Since 1983, more than $1.6 billion has been invested in promoting science and technology. Efforts are now being concentrated on commercializing innovative technologies, particularly in four areas where the province has both a competitive edge and long-range potential.

Medical Research and Biotechnology

Since it was established in 1979 with a $300 million endowment, the Alberta Heritage Foundation for Medical Research has created a medical research environment unmatched in the world, attracting and supporting basic and clinical research scientists in Alberta hospitals and universities. In their search for new knowledge, scientists are laying the groundwork for products and technologies for health care and biotechnology industries. Alberta firms such as Chembiomed, Biosys, and Alberta Genetics are recognized as leaders in Canada's biotechnology industry.

Advanced materials

Plastics, ceramics, and other advanced industrial materials represent a major growth opportunity. The current international market is expanding rapidly and will likely exceed $100 billion

within the next decade. The recently announced WESTAIM Project in Fort Saskatchewan (Sherritt Gordon) is the type of joint venture that will position Alberta in the forefront of this emerging, high-growth industry.

Electronics and Telecommunications

The largest area of advanced technology activity in terms of sales and employment, the electronics industry is also the most diverse, including such product groupings as test, measurement and control apparatus, subassemblies and subsystems, and process automation equipment. Alberta companies are also noted for their innovation in telecommunications technology, with Canada's only manufacturer of cellular communications equipment headquartered in the Province (ie. Novatel Communications).

Companies such as LSI Logic have also been extremely successful in taking advantage of new and emerging opportunities in the field of electronics and electronic circuitry.

Computers and Software

Alberta has approximately 400 computing services companies including firms engaged in data processing, systems services and other "service bureau" operations. The software industry dominates the Alberta scene, with Alberta companies developing more than 900 types of software packages for national and international markets. Companies such as Keyword Office Technologies, DNS Petroleum Consulting, and Datek Industries are recognized around the world as leaders in software and systems development. In the field of computer hardware manufacturing, Alberta is a leader in the development of parallel supercomputing technology (e.g. the Myrias Research Corporation).

Resources

Agriculture

Alberta has one of the world's most productive agricultural economies, producing more than 20% of Canada's annual output. Approximately 32 million acres (13 million hectares) of land are currently under cultivation and a further 21 million acres (8.5 million hectares) of uncultivated land are used as pasture and forage for livestock. While wheat remains the primary crop, the

production of new crops and new varieties of existing crops continues to expand as the industry diversifies. As might be expected, given the Province's ranching traditions, Alberta maintains the largest livestock population in Canada.

Complementing Alberta's primary agricultural sector is a sophisticated research base which provides technical services and products related to disease control, breeding, irrigation technology, crop spraying, seed cleaning, livestock, and crop genetics. This research base strengthens Alberta's agricultural sector and presents numerous opportunities for exporting technical expertise.

Energy

Long known as Canada's "energy province", Alberta has 77% of the country's conventional crude oil. 91% of its natural gas and all of its bitumen and synthetic crude oil reserves. The oil and natural gas sector has responded successfully to the challenge of unstable energy prices in the 1980's, exhibiting steady growth in recent years.

Construction is moving ahead on the **$1.4 billion Husky crude oil upgrader** in Lloydminster on the Alberta-Saskatchewan border. The upgrader, which is scheduled for production start-up in 1992, will have the capacity to convert Alberta and Saskatchewan heavy oil and bitumen into synthetic crude oil at the rate of 46,000 barrels per day. The project is expected to create about 5,800 person years of employment during the construction phase and 1,830 direct and indirect jobs when completed (330 jobs at the upgrader itself).

Construction of the **$4 billion OSLO oilsands plant** near Fort McMurray is expected to get underway in 1992. This plant will generate over 18,000 person years of employment during construction and require close to 3,000 permanent employees upon completion. One of the largest projects ever announced in Western Canada, it will produce 77,000 barrels of oil a day with production beginning in 1997.

The world's largest producer of sulphur from hydrocarbon sources, Alberta produces more than 95% of Canada's total. The province also accounts for two-thirds of the value of Canada's mineral production. While most output is related to natural gas and oil, the Province also has substantial mineral deposits and extensive low-sulphur coal reserves. Coal mining has become increasingly important in recent years, with annual production more than doubling since 1979.

Forestry

More than half of Alberta is covered by forests. Constituting some 360,000 square kilometres, this represents an area almost equal in size to Japan. Of the total forest area, 196,000 square kilometres are classified as timbered forest land and contain both hardwood and softwood species.

Development of these resources is perhaps Alberta's greatest success story of the past decade. **New pulp, paper, and lumber projects announced or commenced in 1988/1989 amount to over $3.4 billion - investments on a scale which will see forestry achieve its potential as a dominant force in the provincial economy over the next few years (see Table 1).**

Table 1

Alberta Forestry Projects - Announced, Commenced, Completed in 1988/89

Name	Location	Total Cost ($Millions)	Construction Employment (Persons Years)	Permanent Employment (Direct Jobs)
Alberta Energy Company	Slave Lake	168	300	125
Alberta Newsprint Company	Whitecourt	379	720	375
Alberta-Pacific Forest Industries	Athabasca/Lac La Biche	1,300	3,500	1,300
Daishowa Canada	Peace River	550	2,000	630
Millar Western	Whitecourt	205	350	190
Northern Forest Industries	Lac la Biche	16	35	140
Proctor and Gamble	Grande Prairie	365	1,200	465
Proctor and Gamble	Manning	35	50	35
Sunpine Forest Products	Rocky Mountain House	32	600	265
Weldwood of Canada	Hinton	393	1,140	370
Weldwood of Canada	Hinton	50	75	120
Total		3,493	9,970	4,015

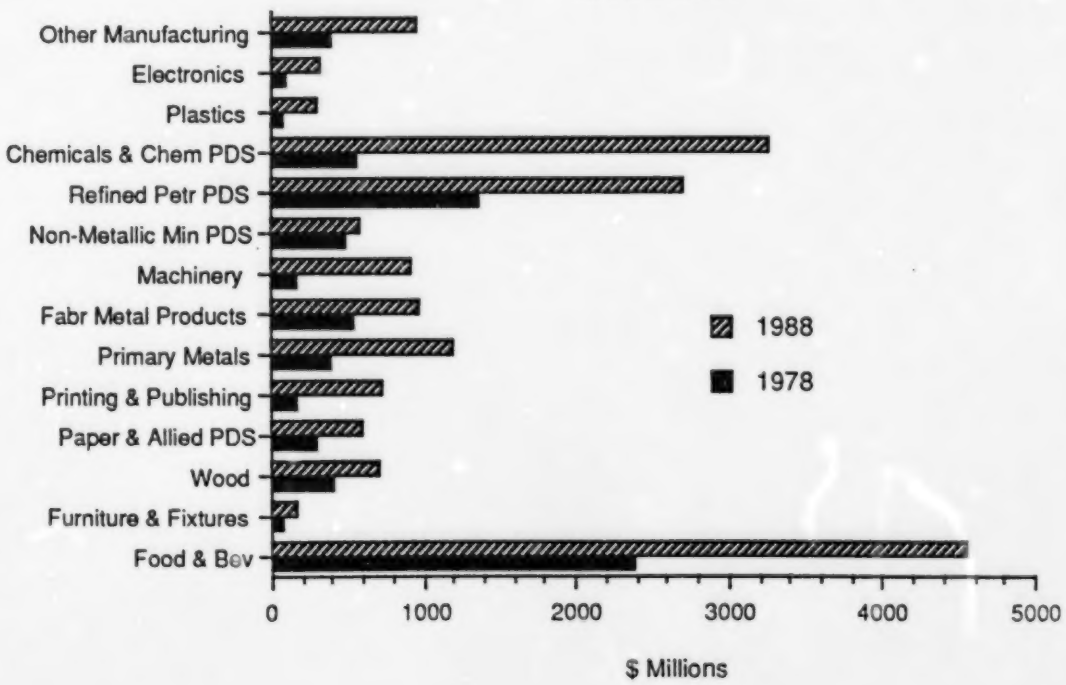
Manufacturing

Expansion of the manufacturing sector has long been an important part of Alberta's economic diversification strategy. Over the past decade, the value of shipments, an indicator of manufacturing activity, has grown dramatically. **Since 1978, when manufacturing shipments were $7.4 billion, values have increased by an average annual rate of 8.4%. In 1988, the total value of manufacturing shipments reached $18.9 billion.**

Exports to international markets point to the growing importance of manufactured goods to the Alberta economy. **In 1988, exports of manufactured goods reached $3.9 billion and accounted for almost 28% of Alberta's total international exports.**

Figure 1 shows the growth in the value of Alberta manufacturing shipments from 1978 to 1988.

Figure 1
Value of Alberta Manufacturing Shipments
1978 & 1988



Food and Agricultural Processing

The Province's largest manufacturing sector, food and beverage shipments amounted to nearly $5 billion in 1988. The meat processing industry, which represents about half of total processed food shipment, is undertaking new investments that will accelerate the development of a world-class food processing industry. New market opportunites have also emerged in such areas as specialty prepared frozen products, ethnic foods, condiments and gourmet items.

Petroleum Refining

Alberta refineries, which supply most of the western Canadian market, make up more than one-fifth of Canada's refining capacity. In 1988, the total value of shipments amounted to $2.7 billion. Transportation fuels, including gasoline, diesel fuel and aviation fuel, make up about 80% of all production. Other products include heating oil, asphalt, petrochemical feedstock, kerosene and lubricants.

Petrochemicals and Plastics

Alberta produces 78% of Canada's methanol, 55% of its ethylene, and 75% of its ammonia-based and solid nitrogen fertilizer products. Over the past decade, a world-scale ethane-based petrochemical industry has developed in the Province, as more than $6 billion has been invested in facilities **The value of shipments has increased from $600 million in 1976 to more than $3.5 billion in 1988.**

Today, the industry is planning investments which could effectively double Alberta's ethylene capacity and production of related derivatives (e.g. Alberta Gas Ethylene and Novacor Chemicals have announced a $635 million expansion of their Joffre operations, Dow Chemical is planning an $800 million hydrocarbon project for Fort Saskatchewan, and engineering work is already underway for Neste/Oy's new$270 million MTBE facility in Edmonton).

In the plastics industry, 185 companies now produce a wide range of products, including grocery and garbage bags, polyethylene film sheeting for food packaging, and plastic bottles and containers used for beverages and petroleum products. **More than twenty-five new projects or expansions, together representing new investment of more than $95 million, are planned for 1989.**

The Canada/United States Free Trade Agreement is expected to further improve the competitiveness of Alberta's petrochemical producers, an advantage which will be maintained through Alberta's new ethane policy which assures a competitively-priced ethane feedstock. Opportunities for expanded production and increased exports are particularly strong for methanol, polyethylene, ethylene glycol, styrene, polyvinyl chloride, and vinyl chloride. The elimination of the relatively high United States tariffs is also expected to create opportunities for Alberta-based production of petrochemical products not currently manufactured in the Province (e.g. high-density polyethylene, higher olefins, etc.).

Pulp, Paper and Wood Products

Already an important part of the manufacturing sector, new developments and expansions within the forest industry have created even greater potential for value added manufacturing operations. The spotlight has now turned to business and investment opportunities in such areas as panel, paper and wood product manufacturing. With tremendous prospects for growth, this sector represents a key component in Alberta's drive toward continued economic diversification.

Metal and Machinery Products

Primary metals companies produce oil industry tubular goods and primary shape steel for further upgrading. In steel production, the industry is dominated by three major metal companies which operate eight plants in Alberta. Some 450 fabricated metals and machinery firms manufacture oil and gasfield equipment, structural steel and equipment for primary industries. The construction materials industry is also preparing to meet escalating demands as new investment brings large-scale forestry and energy projects on stream.

In 1988, the metal-based industries accounted for over $3 billion in manufacturing shipment - or 17% of the total value of Alberta manufacturing shipments. From 1978 to 1988, growth in the metal-based industries was approximately 280%.

Other Industrial and Consumer Products

An increasingly diverse range of industrial products - including aerospace and transportation equipment, as well as industrial and specialty chemicals - is being manufactured in Alberta. Firms have incorporated advanced manufacturing techniques and have diversified product lines. Consumer products manufacturers have also demonstrated considerable growth in recent years. **Today, approximately 250 Alberta firms produce consumer goods including sportswear, skiwear and other garments, furniture and fixtures, recreational vehicles and leisure products, sporting goods, appliances, jewelry, and products for the equine industry.**

Services

Alberta's service industries, best defined as all those industries not primarily engaged in the production of goods, are an essential part of the provincial economy. **Services now account for approximately 60% of Alberta's GDP and for more than 70% of all jobs in the Province.**

The service sector is the fastest growing area of international commerce and is estimated to account for 25% of the value of all international trade. There is tremendous potential for Alberta companies in the service industries to take advantage of new and emerging opportunities and to export their services internationally.

Tourism and Leisure

Tourism is forecast to become the world's largest industry by the year 2000. Tourism plays an important part in the Alberta economy, involving thousands of businesses in a variety of sectors. In 1988, it is estimated that the industry supported the equivalent of 75,000 full-time jobs and generated revenues of $2.3 billion. Alberta's many scenic attractions and its solid reputation for hosting world class events - such as the XV Olympic Winter Games in Calgary - make tourism a growth industry with exceptional potential for generating additional revenues and employment opportunities for Albertans.

Business Services

One of the fastest-growing segments of the Province's service sector, business services employ approximately 60,000 Albertans – more than 5% of the Province's workforce.

Many of Alberta's business service industries (including engineering, scientific and technical services, computer services, and management consulting), as well as transportation and communications, represent focal points for future growth and job creation. In addition to being important in their own right, business services also have vital linkages with the goods-producing industries and enhance their competitiveness.

Alberta has a sophisticated engineering sector and is well known for its expertise in petroleum, mechanical, and civil engineering. Many of Alberta's engineering firms have penetrated export markets, and exports now account for almost 10% of the sector's $900 million in annual revenues. Alberta firms are also recognized as world leaders in the development and application of cold weather technologies.

Oil and Gas Technology

Alberta's oil and gas industry has developed sophisticated technology in enhanced oil recovery and oilsands development. The Alberta Oil Sands Technology and Research Authority runs a number of projects on enhanced oil recovery involving conventional oils, heavy oil, and oilsands. Many of these projects, especially those involving conventional and heavy oil, have promising applications in other producing countries.

Culture and the Arts

Film, videos, television programs, record production, book publishing, and arts and crafts activities and products are all examples of areas where Alberta's cultural industries have excellent growth potential. Accomplishments in these areas include the completion of twenty-seven major film and television productions through the Alberta Motion Picture Development Corporation, creation of the ACCESS educational network, and the establishment and continued success of the Banff Television Festival.

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